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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,977

01/18/2006

Naoshi Masukawa

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EXAMINER

GUGLIOTTA, NICOLE T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,977	Applicant(s) MASUKAWA ET AL.	
	Examiner NICOLE T. GUGLIOTTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 - 18 is/are pending in the application.
- 4a) Of the above claim(s) 15 - 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9 - 14, 17 - 18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 9 - 18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/28/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 9 - 14 and 17 -18, drawn to a honeycomb structure body.

Group II, claim(s) 15 - 16, drawn to a method of manufacturing a honeycomb structure body.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

3. The special technical feature is defined as a honeycomb structural body comprising a plurality of honeycomb segments, a bonding layer interposed between said segments and an intermediate layer interposed between the bonding layer and the honeycomb segments. WO 2003/048072 A1 teaches a honeycomb structure comprising a plurality of honeycomb segments bonding via a bonding layer, which is comprised of a cement layer. At least one undercoat layer is present between the honeycomb segment and the cement layer. As the prior art teaches the special

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technical feature, the special technical feature does not provide a contribution over the prior art. As such, unity of invention is lacking.

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Telephone Election

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7. During a telephone conversation with Kevin Gualano and Jesse Collier (Registration No. 53,839) on May 5, 2008 a provisional election was made without traverse to prosecute the invention of Group 1, claims 9 – 14 and 17 - 18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15 – 16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

8. Table 2 of applicant's specification shows Examples 1 – 3 to have greater than 20% inorganic oxide. However, the values given in Table 1 for the amounts of K_2SiO_3 in the intermediate layer is in disagreement with the values of inorganic oxide (which must be K_2SiO_3 based on the disclosure of applicant) given in Table 2. The amount of the vitreous phase in the intermediate layer is critical to applicant's claims of the pore values attained in claim 1.

9. In addition, there is no support for Claim 10 based upon the examples in Tables 1 and 2 disclosed by applicant.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 9 – 14 and 17 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (US 2005/0079975 A1), in view of Hong et al. (US 2005/0011174 A1).

12. In regard to claim 9, Fujita discloses a honeycomb structure comprising a plurality of honeycomb segments bonded into one piece via a bonding layer, wherein the bonding layer comprises at least one cement layer and at least one undercoat layer present between the honeycomb segment and the cement layer (Section [0013]). However, Fujita is silent in regard to pores being present in the undercoat.

13. Hong et al. disclose the sealing material layer may be made from a dense material or may be made from a porous material so as to allow exhaust gases to enter the inside thereof, and on the contrary, the sealing material layer is desirably made from a dense material. This is because the sealing material layer is formed so as to prevent exhaust gas leak from the circumference of the ceramic block when the honeycomb structural body is placed in an exhaust passage of an internal combustion engine (Section [0097]).

14. It would have been obvious to one skilled in the art at the time the invention was made to want a bonding material layer dense, as to prevent exhaust gas leaking from the circumference of the ceramic block. Therefore, it would have also been obvious to one skilled in the art at the time the invention was made for the intermediate layer, which is an additional stronger bonding layer, to also be dense (via mostly small pore sizes), especially because the intermediate layer is directly in contact with the

circumference of the porous ceramic blocks. A denser intermediate layer directly against the surface of the porous filters would further reduce the probability of exhaust gas leakage.

15. In regard to claim 10, Fujita discloses 20% of a ceramic fiber in undercoat layer 1 of Table 2. Such ceramic fibers may include silica, alumina, or silica-alumina (Section [0029]).

16. In regard to claims 11, 12, and 17, Fujita discloses silica sol (applicant's vitreous phase) present in undercoats 1 and 2 (Table 1).

17. In regard to claims 13 and 18, Fujita discloses it is preferred that the openings of the through-holes of the honeycomb structure 3 are plugged alternatively (Section [0040]).

18. In regard to claim 14, Fujita discloses the honeycomb structure of his invention is used as a catalyst carrier in an internal combustion engine, a boiler, a chemical reactor, a reformer of fuel cell or the like (Section [0039]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE T. GUGLIOTTA whose telephone number is

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(571)270-1552. The examiner can normally be reached on M - Th 8:30 - 6 p.m., & every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NICOLE T. GUGLIOTTA
Examiner
Art Unit 1794

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794